BEST AVAILABLE IMAGES

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images may include (but are not limited to):

- BLACK BORDERS
- TEXT CUT OFF AT TOP, BOTTOM OR SIDES
- FADED TEXT
- ILLEGIBLE TEXT
- SKEWED/SLANTED IMAGES
- COLORED PHOTOS
- BLACK OR VERY BLACK AND WHITE DARK PHOTOS
- GRAY SCALE DOCUMENTS

IMAGES ARE BEST AVAILABLE COPY.

As rescanning documents *will not* correct images, please do not report the images to the Image Problem Mailbox.

PATENT SPECIFICATION

Application Date : May 21, 1926. No. 13,004/26. 268,571

Complete Left: Feb. 11, 1926.

Complete Accepted: April 7, 1927.

PROVISIONAL SPECIFICATION.

Improvements in Adjustable Pipe Clips.

We, TRIUMPH CYCLE COMPANY LIMITED, a British company, and JESSE GEORGE GRIFFITHS, a British subject, both of Triumph Works, Priory Street, Coventry, Warwickshire, do hereby declare the nature of this invention to be as follows:—

This invention relates to adjustable pipe clips, of the kind comprising a band adapted to encircle the pipe and to have its ends drawn together by means of a tangentially arranged bolt or other tightening device, and its principal object is to provide a simple and inexpensive construction which will possess considerable strength at the parts engaged by the bolt or the like.

According to this invention, the clip comprises a pair of split rings which initially are in the same plane and are connected by integrally formed webs, one on each side of the split, and these rings are folded to lie one over the other, the webs forming lugs adapted to be engaged by the tightening device. Thus in the case of a bolt the webs would be folded to form hollow lugs through which the bolt would extend.

It will be seen from the foregoing that by making the webs of a substantial width at their connection with the ring, they will transmit the load of the bolt or the like without risk of distortion or fracture.

In a preferred method of carrying out the invention, the clip is formed by presswork, and details of its finished form will be apparent from a description of the process of manufacture.

The first operation consists in piercing a metal strip to provide a pair of spaced holes slightly smaller in diameter than the finished internal diameter of the clip. The next operation is that of cupping the two holes, i.e., flanging their edges outwardly on the same side of the strip, whereby also the holes are enlarged to the finished internal diameter of the clip.

The next operation is "blanking", whereby a relatively wide strip is left to connect the two perforated portions, whilst the remainder of the edge of the blank follows round the flanged portion comparatively closely so that actually the two rings are of L-section with a flat strip joining them. On one side of the strip where the latter meets the ring portion, an abrupt shoulder may be formed for a purpose later described.

The next operations comprise slotting the web from end to end and through the flange into the ring, this slot preferably increasing in width from its junction with the ring to the middle of the web, and thereafter folding the blank about the middle of the web so that the two ring portions lie one against the other, whilst the fold of the web is such that the parts on each side of the split form tubular portions adapted to receive the bolt. When thus finished, the two flat portions of the ring lie face to face and the flanged portions extend on each side of the junction, the completed ring thus being substantially of T-section. This web, however, of the T is relatively shallow so that the ring may not be too rigid to be contracted by the bolt.

The bolt may be of ordinary form with a circular head, one side of which is cut away so that it may abut the shoulders previously mentioned on the web and thus be held non-rotatable during tightening up.

A clip as thus constructed is relatively inexpensive to manufacture and exceedingly strong in the vital parts where the tightening up device is applied. Also it is exceedingly neat, and the centre of the bolt is brought very close to the inner

[Price 1/-]

edge of the clip. It is to be understood that the lugs for the fastening device can be modified to suit any type of the latter which might be adopted, as for instance, a cam and lever device, and if preferred the lugs might be flattened to suit such a fixing device. It will also be understood that where modifications in the process of manufacture are adopted, the split could be formed by other means than those described above.

Dated this 19th day of May, 1926.

ERIC W. WALFORD,
Fellow of the Chartered Institute of Patent Agents,
19, Hertford Street, Coventry,
Agent for the Applicants.

COMPLETE SPECIFICATION.

Improvements in Adjustable Pipe Clips.

We, TRIUMPH CYCLE COMPANY LIMITED, a British company, and JESSE GEORGE GRIFFITHS, a British subject, both of Triumph Works, Priory Street, Coventry, Warwickshire, do hereby declare the nature of this invention and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement:—

This invention relates to adjustable pipe clips of the kind constituted by a flat strip of metal having spaced perforations therein flanged at their edges and joined by a longitudinal slot, the strip being folded so that the perforations are brought into alignment and the bend of the fold forming a housing for the clamping bolt, which is thus located at the split portion constituted in the finished clip by the formation of the slot between the perforations.

In a previously proposed construction the folding was so effected that the edges of the flanges were made to meet one another, whilst the clamping bolt on one side made contact at the bend of the fold, and on its opposite side was tangential to the flanges around the perforations. The bolt was also prevented rotating by means of a stud depending from its head and adapted to lie in the space between the folds of the strip.

The object of the present invention is to provide an improved support for the bolt, and also a simplified method of preventing its rotation.

According to this invention, the strip is so bent that its two flat portions lie one against the other with the flanges outward, and the fold of the web is shaped to form a tubular portion for reception of the bolt. In this way the bolt is well supported on all sides and its head and nut have a full circular instead of a partial bearing upon the clip.

Preferably one side of the strip is cut back to form near the apertures shoulders adapted to engage a flat on the head of the clamping bolt.

In the accompanying drawings which show a preferred method of carrying out the invention by press work as hereunder described,

Figure 1 shows a strip of material perforated with two spaced holes constituting the first operation,

Figure 2 is a section on the line II. II of Figure 1 showing the next operation of cupping the edges of the holes,

Figures 3 and 4 are plans showing the effects of the next two operations,

Figure 5 indicates the effect of the bending operation as viewed edgewise,

Figure 6 is an elevation of the finished clip complete with the adjusting bolt, and

Figures 7 and 8 are a front and edge view respectively showing a modification of the clip and its clamping means.

The first operation (Figure 1) consists in piercing a metal strip 2 to provide a pair of spaced holes 3 slightly smaller in diameter than the finished internal diameter of the clip. The next operation (Figure 2) is that of cupping the two holes, i.e., flanging their edges outwardly as at 4 on the same side of the strip, whereby also the holes 3 are enlarged to the finished internal diameter of the clip.

The next operation (Figure 3) is "blanking", whereby a relatively wide strip or web 5 is left to connect the two perforated portions, whilst the remainder of the edge 6 of the blank follows round the flanged portion 4 comparatively closely so that actually the two rings so formed are of L-section with a flat strip 5 joining them. On one side of the strip or web where the latter meets each ring portion, an abrupt shoulder 7 may be formed by cutting back the strip for a purpose later described.

The next operations comprise slotting the web 5 from end to end as at 8, Figure 4, and through the flanges 4 into the rings, this slot preferably increasing in width from its junction with the rings to the middle of the web, and thereafter folding the blank about the middle of the web as in Figure 5, so that the two ring

portions lie one against the other with the flanges 4 outward, whilst the fold of the web is such that the parts thereof on each side of the slot 8 form tubular portions or lugs 9 adapted to receive the clamping bolt 10 (Figure 6). When thus finished, the two flat portions of the ring lie closely face to face with the flanged portions outwards, the completed ring thus being substantially of T-section. The web, however, of the T is relatively shallow so that the ring may not be too rigid to be contracted by the bolt.

The bolt 10 may be of ordinary form with a circular head 11, one side of which is cut away so that the flat edge may abut the shoulders 7 (Figure 3) previously mentioned on the web 5 and thus be held non-rotatable during tightening up.

A clip as thus constructed is relatively inexpensive to manufacture and exceedingly strong in the vital parts where the tightening up device is applied. Also it is exceedingly neat, and the axis of the bolt 10 is brought very close to the inner edge of the clip. It is to be understood that the lugs 9 for the fastening device can be modified to suit any type of the latter which might be adopted, as for instance, the known cam and lever device shown in Figures 7 and 8, and if preferred the lugs might be flattened to suit such a fixing device in which the stem 12 is of oblong cross section. It will also be understood that where modifications in the process of manufacture are adopted, the split constituted by the slot 8 could be formed by other means than those described above.

Having now particularly described and ascertained the nature of our said invention and in what manner the same is to be performed, we declare that what we claim is:—

1. An adjustable pipe clip of the kind referred to, in which the strip is so bent that its two flat portions lie one against the other with the flanges outward and the fold of the web is shaped to form a tubular portion for reception of the bolt, substantially as and for the purpose described.

2. An adjustable pipe clip as claimed in Claim 1, in which one side of the strip is cut back to form near the apertures shoulders adapted to engage a flat on the head of the clamping bolt, substantially as and for the purpose described.

3. The complete adjustable pipe clip, substantially as described or as illustrated in Figures 1—6 or Figures 7 and 8.

Dated this 10th day of February, 1927.

ERIC W. WALFORD,
Fellow of the Chartered Institute of Patent Agents,
19, Hertford Street, Coventry,
Agent for the Applicants.

Redhill: Printed for His Majesty's Stationery Office, by Love & Malcomson, Ltd.—1927.

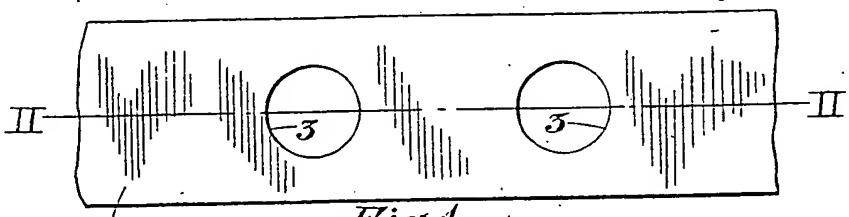

Fig.1

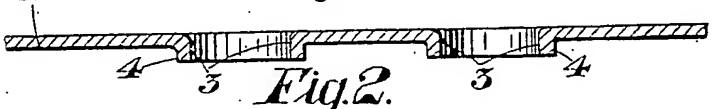

Fig.2.

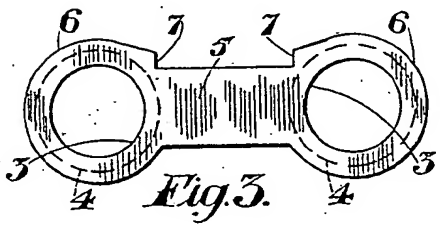

Fig.3.

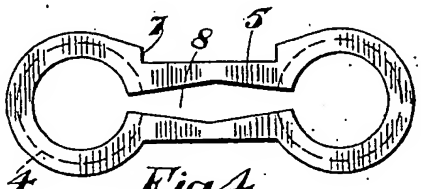

Fig.4.

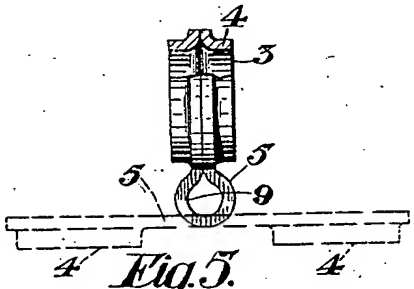

Fig.5.

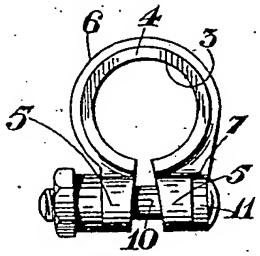

Fig.6.

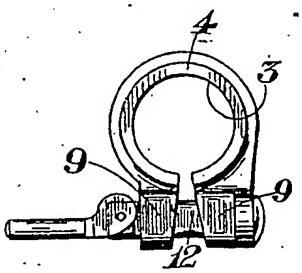

Fig.7.

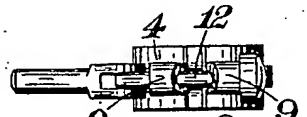

Fig.8.

Charles & Read Ltd. Photo Litho